

CLAIMS

1. A deployable structure comprising:
a plurality of pairs of hingeably connected members,
a first hinge element; and
a second hinge element;
wherein the two members of each pair of hingeably connected members are
connected to the first and the second hinge elements respectively; and
wherein the first hinge element is capable of being stabilized for facilitating
stabilization of the deployable structure into a deployed state.
2. The deployable structure as claimed in claim 1, further comprising:
a central member wherein the first and second hinge elements are connected
to different ends of the central member; and
wherein one portion of the first hinge element is detachably connected to the
central member such that the first hinge element is stabilized when connected to the
central member.
3. The deployable structure as claimed in claim 2, further comprising a
fastening element to fasten the first hinge element to the central member.
4. The deployable structure as claimed in any one of the preceding claims,
comprising three or more pairs of hingeably connected members.
5. The deployable structure as claimed in any one of the preceding claims,
wherein one of the two members in each pair of hingeably connected members is
connected to the other member of said pair by at least one third hinge element.
6. The deployable structure as claimed in claim 5, further comprising
cables or flexible elements connecting the third hinge elements.
7. The deployable structure as claimed in any one of the preceding claims,
wherein one of the two members in each pair of hingeably connected members is
connected to the other member of said pair via one or more secondary members.

8. The deployable structure as claimed in claim 7, wherein the secondary members are substantially parallel to an imaginary line joining the first and second hinge elements, when the deployable structure is in the deployed state.

9. The deployable structure as claimed in any one of the preceding claims, wherein the hinge elements allow a single degree-of-freedom of movement.

10. The deployable structure as claimed in any one of the preceding claims, wherein the members comprise one or more of a group comprising struts, rods, tubes, telescopic elements, self stabilizing elements and cables.

11. The deployable structure as claimed in any one of the preceding claims, further comprising one or more energy stored devices for facilitating deployment and/or folding of the deployable structure.

12. An assembly comprising a plurality of deployable structures, each deployable structure comprising:

a plurality of pairs of hingeably connected members,

a first hinge element; and

a second hinge element;

wherein the two members of each pair of hingeably connected members are connected to the first and the second hinge element respectively; and

wherein the first hinge element is capable of being stabilized for facilitating stabilizing the deployable structure in a deployed state.

13. The assembly as claimed in claim 12, wherein each deployable structure further comprises:

a central member wherein the first and second hinge elements are connected to different ends of the central member; and

wherein one portion of the first hinge element is detachably connected to the central member such that the first hinge element is stabilized when connected to the central member.

14. The assembly as claimed in claims 12 or 13, further comprising at least one cable or connecting the plurality of deployable structures.

15. The assembly as claimed in claim 14, wherein the at least one cable or connects hinge elements of the plurality of deployable structures.